General Environmental Incident Summary

Incident: 1880 ***Date/Time Notice:*** 2/26/2013 1200 ***DEM Incident No:***

Responsible Party: Minot AFB

Date Incident: **2/25/2013** ***Time Incident:*** 1030 ***Duration:*** 24 hours

County: McLean ***Twp:*** 150 ***Rng:*** 89 ***Sec:*** 21 ***Qtr:*** SW SE

Lat: 47.79698 ***Long:*** -102.07560 ***Method:*** Derived from TRS

Location Description: approximately 35 miles WNW of Garrison, ND

Submitted By: Michael Getty ***Affiliation:***

Address:

City: ***State:*** ***Zip:***

Received By:

Contact Person: Michael Getty
445 Peacekeeper Place
Minot AFB, ND 58705

Distance Nearest Occupied Building: 1.5 Miles

Type of Incident: Vehicle Accident

Description of Released Contaminant: **JP-8 fuel**

Volume Spilled: **180.00 gallons** ***Ag Related:*** No

EPA Extremely Hazardous Substance: No ***Reported to NRC:*** Unknown

Cause of Incident:

Equipment malfunction caused UH-N1 Air Force Helicopter to hard land.

Risk Evaluation:

None

# of Fatalities: 0 ***# of Injuries:*** 2 ***Affected Medium:*** 03 - soil

Potential Environmental Impacts:

None

Action Taken or Planned:

Once the Air Force and FAA have completed their investigations, the helicopter will be removed to Minot
AFB; the estimated quantity of spilled fuel will be remediated by removal of any contaminated soil and replacement with new top soil.

Wastes Disposal Location: Sauer Landfill

Agencies Involved: State Highway Patrol, Local Fire Department, Local Law Enforcement

Updates

Date: 4/5/2013 ***Status:*** Correspondence ***Author:*** Johnson, Kirk

Updated Volume:

Notes:

Update on 4/5/13 from Dan Kluck: When the helicopter first went down the initial estimate was that 180 gallons were spilled because that is how much fuel should have been left on board after the amount of flying that had occurred prior to the hard landing.

Update on 5/28/12 from Dan Kluck on the results of the samples analyses and where the contaminated soil was taken:
The soil that was removed was placed in six barrels. I tested two of the barrels and they came back negative. As the soil was excavated it showed no signs of residual contamination; meaning it looked and smelled clean. Based on the visual and the lab tests we intend to dump the soil here on base.

-----Original Message-----
From: Johnson, Kirk D. [mailto:kijohnson@nd.gov]
Sent: Tuesday, May 28, 2013 1:32 PM
To: KLUCK, DANNY F GS-11 USAF AFGSC 5 CES/CEAN
Subject: RE: Huey Site Cleanup History

Thanks, Dan, good job on the summary; as far as we're concerned it's cleaned up. Where did the remainder of the contaminated soil go? Thanks

Kirk Johnson
ND Dept. of Health
Div. of Waste Management
918 E. Divide Ave., 3rd Floor
Bismarck, ND 58501-1947
ph: 701-328-5166

-----Original Message-----
From: KLUCK, DANNY F GS-11 USAF AFGSC 5 CES/CEAN [mailto:danny.kluck.1@us.af.mil]
Sent: Tuesday, May 28, 2013 1:24 PM
To: Johnson, Kirk D.
Subject: Huey Site Cleanup History

Mr. Johnson,

On 13May2013 engineers from Minot AFB excavated a 6 ft. diameter x 18 in. deep hole at the helicopter site. The excavated soil was placed in barrels and removed from the site. The soil at the bottom of the hole and the soil that was placed in the barrels were both sampled for BTEX. Clean soil was placed in the hole and compacted. The lab tests of the soil sampled came back negative for hydrocarbons.

Attached is the .ppt presentation I sent up my chain of command in regards to the helicopter site cleanup.

Dan Kluck
5 CES/CEIEC
Minot AFB
701-723-4825

What actually happened was that when the helicopter was going down the pilot shut off the fuel pumps and since the tanks are sealed a minimum amount of JP-8 fuel was actually spilled. The rotor hit the ground when it tipped over and ruptured the transmission spilling transmission fluid. Some hydraulic lines were also ruptured spilling hydraulic fluid.

Once recovery was underway the fuel tanks were drained and with the amount of flying that was done it was determined that only 16 gallons of JP-8 were unaccounted for or presumably spilled.

The transmission lost 6 quarts of fluid and the hydraulic lines that ruptured lost 1 quart. I did a site inspection on 6Mar2013 and have attached my report and the pictures I took.

In the pictures attached spills 2, 3, 4 and 5 are transmission fluid that was spilled when the transmission was removed from the helicopter. That material stayed on top of the snow and was easily recovered.

Once we started the clean-up of the contaminated snow I could tell there was some contamination in the soil underneath the area where the rear of the cabin was resting on the snow. That is what we are addressing now with our clean-up efforts."

Carl Ness followed up by telephone. AF and FAA investigating scene and keeping it a closed site until investigation done. Due to onboard shutoffs, it is unknown whether or how much fuel/oils leaked to ground surface. When gov't investigation complete, chopper will be moved off location, and assessment/cleanup will be handed over to Earthmovers. We will need to follow-up on the ground at that time.

Update: On 4/3/13, Dan Kluck of Minot AFB updated the status of soil analyses & cleanup at the site, here is his email update: " Soil samples associated with a petroleum product spill which resulted from a helicopter "hard landing" were taken at the incident site on March 11, 2013 and forwarded to a certified laboratory for analysis. The sample analyses results confirm contamination of the soil with petroleum products. The contamination is most concentrated at a point where the rear portion of the helicopter cabin was resting on the ground. Contamination is highest at ground level and decreases with depth to at least six inches. At a point two and a half feet away from the rear portion of the helicopter, contamination
was found to a depth of at least four inches. At a point seven feet away there is no contamination present in the soil. A control sample taken twenty five feet away from the site and at a depth of six inches shows no contamination except for traces of residual toluene, a hydrocarbon derivative, not associated with the incident. Please reference the attached site contamination slide, spill sample locations, table of spill sample test results.

When the helicopter landed and turned over onto its side, the top layer of soil may have been warmed from the aircraft which allowed some of the fuel to migrate downward through the soil. As the helicopter and soil cooled the migration halted. The contamination is predominantly localized where the rear of the cabin was in contact with the ground.

In order to bring the ground back to its original condition it is our recommendation that the top soil be removed to a depth of approximately 12 inches and replaced with clean top soil. We anticipate the area of excavation will be limited to an area approximately 6 feet in diameter where the concentration of petroleum product was shown to be the highest. When the contaminated soil is removed the bottom of the excavated area should be sampled to confirm total removal of contaminated soil; filling the excavation should not occur until sample analyses come back confirming a level of contamination equal to or better than the control sample."

Dan Kluck
5 CES/CEAN
Minot AFB
723-4825

Kirk: The Dept should again contact Mr. Kluck after Strata has completed all the contaminated soil removal at the accident site, to give a final cleanup assessment.